

## MODULE IV

### STORAGE AND TREATMENT IN TANKS



## TABLE OF CONTENTS

MODULE IV - STORAGE AND TREATMENT IN TANKS	Page
IV.A. Applicability.....	1
IV.B. Waste Identification and Tank Usage .....	1
IV.C. General Operating Requirements.....	4
IV.D. Specific Operating Requirements .....	6
IV.E. Special Requirements for Ignitable or Reactive Wastes.....	6
IV.F. Special Requirements for Incompatible Wastes .....	7
IV.G. Inspection Requirements.....	7
IV.H. New and Modified Tank Systems .....	8
IV.I. Closure and Post- Closure Care .....	8
(All Attachments Referenced in Volume-1 of the Permit are located in Volume-2)	
Attachment IV-1 .....	Tank System Designs, Assessments, Drawings and Specifications
Attachment IV-2 .....	Stabilization Reagent List



## MODULE IV - STORAGE AND TREATMENT IN TANKS

### IV.A. APPLICABILITY

The requirements of this module pertain to the storage and treatment of hazardous waste in the tank systems identified in Condition IV.B. The Permittee shall comply with R315-8-10 and the conditions of this permit for all tank systems.

Management of PCB in tanks shall be accordance with Module X of this permit.

### IV.B. WASTE IDENTIFICATION AND TANK USAGE

IV.B.1. CERCLA Hazardous Wastes. The Permittee may receive wastes that arrive without E.P.A. waste code numbers, provided that these wastes are from remediation sites regulated under CERCLA and they comply with all CERCLA off-site management policies. These wastes shall be managed as hazardous wastes and are subject to the terms of this permit.

IV.B.2. RCRA/TSCA Wastes. The Permittee may receive wastes that arrive with EPA waste codes and are also regulated by TSCA. These wastes are subject to the terms of this permit.

IV.B.3.a The Permittee shall only treat or store hazardous wastes or RCRA/TSCA wastes in the tanks specified in Conditions IV.B.3. through IV.B.8., subject to the terms of this permit and the Land Disposal Restriction (LDR) treatment standards specified in R315-13-1.

IV.B.3.b Tanks marked as "INACTIVE" in Conditions IV.B.3 through IV.B.8, below, are not currently in use and may not be placed into service until certified as suitable for its intended use as required by Condition IV.C.12 and approved by the Executive Secretary. All inactive tanks and tank systems shall be clearly and durably marked or labeled as "**OUT OF SERVICE**" at all times. Inactive tanks and ancillary equipment may not contain free liquids.

IV.B.4. Waste Stabilization Tanks 122-TN-001, -002 and -003

IV.B.4a. Each tank is twenty feet long by twenty feet wide by eight feet high (23,936 gallons capacity) and is constructed of carbon steel.

IV.B.4.b. The Permittee shall only treat the hazardous wastes listed in Attachment II-WAP Appendix 2 in the waste stabilization tanks 122-TN-001, 122-TN-002 and 122-TN-003.

IV.B.4.c. All waste shall be removed from the stabilization tanks following the treatment process, utilizing the normal method of waste removal. If there is waste remaining in the tank that cannot be removed by the normal method of waste removal, the Permittee shall apply the EPA waste codes of the batch of waste not entirely removed, to the subsequent load(s) processed in the tank.

If there is RCRA/TSCA waste remaining in the tank that cannot be removed by the normal method of waste removal, then the Permittee shall consider all subsequent load(s) processed in the tank as PCB.

IV.B.4.d. The waste management practices specified in the Special Waste Management Plan in Attachment II-8 shall apply to wastes F020, F021, F022, F023, F026, F027 and F028.

IV.B.4.e. The maximum level of reagent and waste to be treated in the stabilization tanks shall be no more than five feet or 15,000 gallons. The five-foot level shall be marked on the inside of each stabilization tank. No waste shall splash over the sides of the tank.

IV.B.4.f. For restabilization, an increased volume of waste and reagent may be placed into a tank as long as 4,150 gallons of freeboard (one foot five inches) is maintained (19,797 gallons of waste/reagent). This will accommodate the precipitation from a 25-year, 24-hour storm event and leave enough space to prevent the waste from splashing over the sides of the tanks.

IV.B.4.g. P999 wastes may only be placed in these tanks if the waste is also subject to the F999 waste code for wastes in porous media such as soils.

IV.B.5. Leachate Storage Tanks 119-TN-001, -002, -003 and -004

IV.B.5.a. Design – Tanks 119-TN-001, -002 and -003 are each twelve feet in diameter and twenty feet high (maximum allowable capacity 17,000 gallons per tank). Tank 119-TN-004 is twelve feet in diameter and twenty-eight feet and eleven inches high (maximum allowable capacity of 19,600 gallons). All tanks are constructed of carbon steel.

IV.B.5.b. The Permittee shall only store run-off containment waters from secondary containment, non-hazardous wastewaters, multi-source leachate (F039), and TSCA\RCRA leachate (combination multi-source leachate from Cell 6\B) in Storage Tanks 119-TN-001, 119-TN-002, 119-TN-003 and 119-TN-004. **Leachate from a TSCA-only cell is not permitted to be stored in these tanks.** Treatment is not allowed in these tanks.

- IV.B.5.c. The Permittee shall presume the contents of any individual leachate storage tank to be untreated leachate unless the tank is specifically and clearly marked as containing treated leachate
- IV.B.6. Waste Solvent Storage Tanks 117-TN-001 AND 117-TN-002 (INACTIVE)
- IV.B.6.a. Tank 117-TN-001 design – the tank measures ten feet in diameter by thirty feet high (maximum allowable capacity 20,000 gallons), and is constructed of carbon steel construction.
- IV.B.6.b. Tank 117-TN-002 design – the tank measures eight feet in diameter by twenty feet high (maximum allowable capacity 8,000 gallons) and is constructed of carbon steel.
- IV.B.6.c. The Permittee shall only use the Waste Solvent Storage Tanks WT-2 and WT-3 to store the hazardous wastes listed in Attachment II-WAP Appendix 2 for off-site solvent recovery. Treatment shall not be performed in these tanks.
- IV.B.6.d. The Waste Solvent Tanks shall not be used for storage of hazardous waste unless re-certified in accordance with Condition IV.C.12. and approved by the Executive Secretary. The tanks shall be subject to the requirements of R315-8-18.
- IV.B.7. Acid Storage Tanks 121-TN-002 and 121-TN-003 (INACTIVE)
- IV.B.7.a. Tank 121-TN-002 design – the tank measures ten feet four inches in diameter by sixteen feet seven inches high (maximum allowable capacity 10,000 gallons), and is constructed of fiberglass reinforced plastic.
- IV.B.7.b. Tank 121-TN-003 design - the tank measures nine feet in diameter by fifteen feet high (maximum allowable capacity 7,250 gallons), and is constructed of Kynar.
- IV.B.7.c. Treatment shall not be performed in the acid storage tanks. The Permittee shall only use Acid Storage Tanks 121-TN-002 and 121-TN-003 to store the inorganic acid hazardous wastes listed in II-WAP Appendix 2 prior to neutralization in Reaction tank 121-TN-001.
- IV.B.7.d. The Acid Storage Tanks shall not be used for storage of hazardous waste unless re-certified in accordance with Condition IV.C.12. and approved by the Executive Secretary. The tanks shall be subject to the requirements of R315-8-18.
- IV.B.8. Caustic Storage Tanks 121-TN-004 and 121-TN-005 (INACTIVE)

- IV.B.8.a. Design – the tanks measure twelve feet in diameter by twenty feet high (maximum allowable capacity 16,000 gallons per tank), and are constructed of \*.
- IV.B.8.b. The Permittee shall only use Caustic Storage Tanks 121-TN-004 and 121-TN-005 to store the hazardous wastes listed in Attachment II-WAP Appendix 2 prior to neutralization in a reaction tank. Treatment is not allowed in these tanks.
- IV.B.8.c. The Caustic Storage Tanks shall not be used for storage of hazardous waste unless re-certified in accordance with Condition IV.C.12. and approved by the Executive Secretary. The tanks shall be subject to the requirements of R315-8-18.
- IV.B.9. Treated Liquid Storage Tank 121-TN-006 (INACTIVE)
- IV.B.9.a. Design – the tank measures twelve feet in diameter by fourteen feet six inches high (maximum allowable capacity 11,500 gallons) and is constructed of carbon steel.
- IV.B.9.b. The Permittee shall only use the Treated Liquid Storage Tank to store the hazardous wastes listed in Attachment II-WAP Appendix 2. Treatment shall not be performed in these tanks.
- IV.B.9.c. The Treated Liquid Storage Tanks shall not be used for storage of hazardous waste unless re-certified in accordance with Condition IV.C.12. and approved by the Executive Secretary. The tanks shall be subject to the requirements of R315-8-18.

#### **IV.C. GENERAL OPERATING REQUIREMENTS**

- IV.C.1. The Permittee shall only place hazardous wastes in tanks for the purpose of treatment or storage as specified in the conditions of Section IV.B. of this module.
- IV.C.2. The treatment of hazardous wastes in the tanks identified in the conditions of Section IV.B. of this module, shall meet all treatment standards specified in R315-13-1.
- IV.C.3. All sludges and liquids shall be removed from the treatment tanks and their ancillary systems at the end of each operating day except for the stabilization tanks identified in Condition IV.B.3. This exception applies only to waste that is in the process of being treated. \*waste left in tank over night? RS



- IV.C.4. The Permittee shall use the controls and practices to prevent spills and overflows from each tank system, as specified in Attachment II-5, "Preparedness and Prevention."
- IV.C.5. In the event of an equipment or power failure, the Permittee shall stop adding waste to the affected tank system.
- IV.C.6. The Permittee shall comply with the requirements specified in R315-8-10 when there has been a leak or spill from a tank or tank system that is unfit for use.
- IV.C.7. The Permittee shall comply with the requirements specified in the facility Contingency Plan, Attachment II-6, when there has been a release from a tank system that threatens human health or the environment.
- IV.C.8. The Permittee shall notify the Executive Secretary as soon as possible, but no later than 24 hours after detection of a release of a reportable quantity, as defined in R315-9, from a tank system to the environment.
- IV.C.9. The Permittee shall submit, to the Executive Secretary within 15 days of detection of a release to the environment, a report identifying details of the release, as specified in R315-8-10.
- IV.C.10. The Permittee shall repair a tank system from which there has been a leak or spill or close the tank, if it is unfit for use, as specified in R315-8-10.
- IV.C.11. Before a repaired tank or ancillary piping system is returned to service, it shall be certified by a qualified, independent Utah certified, professional engineer, that the repaired equipment is capable of managing hazardous waste without release for the intended life of the system. In accordance with R315-8-10, the Permittee shall submit the tank certification report to the Executive Secretary within seven days of returning the repaired system to service.
- IV.C.12. A qualified, independent Utah Certified professional engineer shall certify any tank that has been out of service for 360 days. The certification shall state the tank system is capable of handling hazardous waste without release for the intended life of the system. The Permittee shall have this certification performed before the tank is put back into service. In accordance with R315-8-10 the Permittee shall submit the certification report to the Executive Secretary within seven days of returning the tank system to service.

**IV.D. SPECIFIC OPERATING REQUIREMENTS**

- IV.D.1. All F039 leachate shall meet the LDR treatment standards specified in R315-13-1 before final disposal at the facility.
- IV.D.2. RCRA/TSCA waste that has PCB as an Underlying Hazardous Constituent (UHC) shall meet the LDR treatment standards specified in R315-13-1 before final disposal at the facility. In the event the PCB concentration does not meet the LDR treatment standard (when present as an UHC) Grassy Mountain will follow the site-specific treatment variance procedures in R315-13-1 (40CFR268.44 by reference).
- IV.D.3. All container storage run-off shall meet the LDR treatment standards specified in R315-13-1 before final disposal at the facility.
- IV.D.4. All hazardous waste residues from incineration and thermal treatment that are stored or treated in the tank system identified in condition IV.B. shall meet land disposal restrictions prior to final disposal at the facility.

**IV.E. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES**

- IV.E.1. Ignitable or reactive waste shall not be placed in a tank system unless the provisions of R315-8-2.8 and R315-8-10 are met.
- IV.E.2. The Permittee shall record compliance with Condition IV.E.1., as required by R315-8-2.8 and place this documentation in the facility Operating Record.
- IV.E.3. The Permittee shall maintain the safety separation distance around tank systems as specified in the most recent version of the Uniform Building Code.
- IV.E.4. The Permittee shall ground all rail cars (applicable to rail unloading areas) and truck tankers during the unloading of ignitable waste, to an effective and secure earth ground by means of a heavy clamp and cable prior to and during unloading.

**IV.F. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES**

- IV.F.1. The Permittee shall not store acids or oxidizing halides in any carbon steel tank systems.
- IV.F.2. The Permittee shall not store organic material or oxidizing acids in any fiberglass reinforced plastic tank system.
- IV.F.3. The Permittee shall not place hazardous waste in an unwashed tank system that previously held incompatible waste or material. The general requirements for incompatible wastes identified in R315-8-2.8 shall apply.

- IV.F.4. The Permittee shall record compliance with Condition IV.F.3. as required by R315-8-2.8 and place this documentation in the facility Operating Record.

**IV.G. INSPECTION REQUIREMENTS**

- IV.G.1. The Permittee shall comply with the inspection requirements specified in R315-8-10, Condition II.F. and the Tank Inspection Schedules as shown in Attachment II-3; except that only active tanks need to be inspected and the tank heating coils need only be inspected on an annual basis.
- IV.G.2. The Waste Stabilization Tank Systems, Tanks 122-TN-001, 122-TN-002 and 122-TN-003, shall be inspected for leaks at least once during each operating day. Any liquids accumulated in the annulus between the inner and outer shells shall be removed, analyzed, and managed in accordance with this permit.
- IV.G.3. All active tank systems identified in Condition IV.B., shall be certified by a qualified, independent Utah certified, professional engineer, at least once every twelve months. Certification shall state that these tanks are capable of handling hazardous waste without release for the intended life of the system. The Permittee shall have this annual certification performed within 12 months of the last inspection. The certification report shall be incorporated into the Operating Record and submitted to the Executive Secretary within 60 days of the inspection.
- IV.G.4. For each tank system found unfit for use as a result of the inspections required in Condition IV.G.3, the Permittee shall comply with the repair and notification requirements specified in Conditions IV.C.10, IV.C.11 and IV.C.12.
- IV.G.5. All tank inspection logs and certification reports shall be made part of the Operating Record and shall be maintained at the facility for a period of three years.

**IV.H. NEW AND MODIFIED TANK SYSTEMS**

The Permittee shall comply with Conditions I.P., covering planned changes, and I.R., certification of new construction and modifications. All new tanks systems and modification to existing systems shall also meet secondary containment and leak detection requirements specified in R315-8-10.

**IV.I. CLOSURE AND POST-CLOSURE CARE**

IV.I.1. To close a tank system, the Permittee shall remove all waste residues and decontaminate the system as specified in R315-8-7 and R315-8-10, and Condition II.N.

IV.I.2. If a current cost estimate to close a tank system and provide post closure care is greater than the cost estimates specified in Attachment II-7, the Permittee shall notify the Executive Secretary as specified in R315-7-14 and provide updated documentation for financial assurance based on the revised closure plan and post closure care within 90 days of the initiation of closure.

IV.I.3. The Permittee shall maintain funding to close all tanks and tank systems, including those designated as “inactive.”

IV.I.4. Post-closure care of all tank systems shall meet the requirements of R315-8-14.5 and Condition II.N.

